Evidence Based Neonatology : What is New? (Cochrane Reviews Scan)

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The practice of medicine is fast changing from being mainly art, to art and science. Today it is practice of science, which is based on substantial scientific evidence and not merely on impressions, or ineffective observations, which are generated from ill designed studies. Therefore, it is imperative for us to practise only that scientific information, whose foundation is laid in strong scientific evidence generated in well-designed studies. This should be the core principle of our clinical practices with supplementation coming from invaluable art of medicine, which we have treasured with our years of experiences along with innate gift of God. The subsequent section deals on select topics in the field of evidenced based neonatology.

1. Mechanical ventilation (MV) for newborn infants with respiratory failure due to pulmonary disease [1]

When MV was introduced in the 1960s to treat infants with severe respiratory failure due to pulmonary disease, trials showed an overall reduction in mortality which was most marked in infants born with a birth weight of more than 2 Kg. This review does not provide information to evaluate the relative benefits or harms of MV in the setting of modern perinatal care. In settings without modern neonatal care, the introduction of MV should ideally be evaluated in randomised controlled trials for its relative benefits, harms and costs.

2. Heparin for prolonging peripheral intravenous (PIV) catheter use in neonates [2]

The effect of heparin on the duration of PIV catheter use varied across the studies. Because of clinical heterogeneity and heterogeneity in treatment effect, recommendations for heparin use in neonates with PIV catheters cannot be made. There are insufficient data concerning the effect of heparin for prolonging PIV catheter use in neonates. Further research on the effectiveness, the optimal dose, and the safety of heparin is required.

3. Naloxone for narcotic-exposed newborn infants [3]
Some evidence was found that naloxone increases

alveolar ventilation, however workers did not find any data on the pre-specified primary outcomes of this review: the need for assisted mechanical ventilation or admission to a neonatal unit. There is a need for a randomised controlled trial to determine if naloxone confers any clinically important benefits to newborn infants with respiratory depression that may be due to transplacentally acquired narcotic.

4. Devices and pressure sources for administration of nasal continuous positive airway pressure (NCPAP) in preterm neonates [4]

Short binasal prong devices are more effective than single prongs in reducing the rate of re-intubation. Although the Infant Flow Driver appears more effective than Medicorp prongs. The most effective short binasal prong device remains to be determined. The improvement in respiratory parameters with short binasal prongs suggests they are more effective than nasopharyngeal CPAP in the treatment of early respiratory distress syndrome (RDS). Further studies are needed to determine the optimal pressure source for the delivery of NCPAP and long-term outcomes.

These reviews are absolutely recent in the field and are likely to act as strong guiding factors in decision-making. Future periodic, regular similar publications will pave the way for practice of neonatology with difference.

References

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